

Series 3410

High-Power Gas Capsule Lightning Protectors with Integrated High-Pass Filter

Description

SUHNER series 3410 high-power gas capsule protectors with integrated high-pass filter belong to the new generation of ultimate gas capsule protectors – suitable to meet the demanding high RF performance and protection requirements of future mobile communications transceivers with DC powering of outdoor equipment.

The customer is freed from any RF power and IM performance considerations.

Thus, the protectors are especially suitable for multicarrier systems.

The integrated high-pass provides an again improved protection performance to series 3409 protectors. But as the high-pass filter means a DC-blocking on the protected side of the component, this design is especially suitable for products with integrated DC injection facility.

Features

- RF peak power not limited by gas capsule
- Superior RF performance, PIM level lower –150 dBc available
- Availability for applications from 800 MHz to 2200 MHz
- Safe extinguishing of capsule after having conducted a surge current to ground
- Up to factor 500 (more than 99%) reduced residual pulse energy
- Waterproof IP 65
- Gas capsule pre-installed
- DC-blocking on protected side of component
- DC injection facility

Specifications

Electrical data	Requirements
RF:	
Impedance	50 Ω
Frequency range	according to product specification, basic range from 800 MHz to 2200 MHz
RL	20 dB min.
IL	0.2 dB max.
PIM	according to product detail specification (specified products –150 dBc max.)
RF power transmission	500 W min., refer to product detail specification
Protection:	
Surge-current-handling capability	30 kA once and 20 kA multiple (8/20 μ s test pulse)
Residual pulse voltage and energy	according to product detail specification

Mechanical data	Requirements
Coupling nut torque force	according to IEC/MIL
Durability (matings)	500 min.
Bulkhead mounting torque force:	
Mounting hole diameter	
19 mm/ 3/4" max.	20 Nm/14.7 ft-lb
larger than 19 mm	35 Nm/25.8 ft-lb

Environmental data	Requirements/Test conditions
Operation temperature range	- 40 °C...+ 85 °C/ - 40 °F...+ 185 °F
Waterproof degree (IEC 529)	refer to product specification, data refer to the coupled state
Temperature shock	MIL-STD-202, Meth. 107 F, Cond. B, - 65 °C/+ 125 °C
Moisture resistance	MIL-STD-202, Meth. 106 D, 10 cycles
Vibration	MIL-STD-202, Meth. 204, Cond. D, 10-2000 Hz

Material data	Standard	Material	Plating
Component part			
Housings	QQ-B-626	brass	SUCOPLATE®
Male contacts	QQ-B-626	brass	gold or silver plating
Female contacts	QQ-C-530	CuBe2	gold or silver plating
Insulators	ASTM-D-1457	PTFE	
Gaskets	ASTM-E-1418 PS 1	silicone rubber	